## **ABSTRACT**

The present invention provides a process for producing a polysilsesquioxane graft polymer (1) which includes applying ionizing radiation or heat to a mixture including a polysilsesquioxane compound (2) and a vinyl compound (3), a polysilsesquioxane compound including an iniferter group, and a pressure-sensitive adhesive and a pressure-sensitive adhesive sheet using the polymer. According to the present invention, a process for producing a polysilsesquioxane graft polymer which may be used as a pressure-sensitive adhesive exhibiting excellent heat resistance and cohesive force, and the like are provided. In the formula, A represents a linking group, R<sup>1</sup> represents a hydrocarbon group which may have a substituent, R<sup>2</sup> represents a hydrogen atom or the like, R<sup>3</sup> represents a polar group or the like, R<sup>4</sup> represents a hydrogen atom or the like, k<sup>1</sup> to k<sup>3</sup> represent arbitrary positive integers, I to n represent zero or an arbitrary positive integer (excluding the case where "m=n=0"), and Q represents an iniferter group.